

NEW CHILLER SCHEDULE

UNIT MARK	CAPACITY @ 95 F -2%,+10%	MIN. EFF. IPLV	P.D. FT. HD.	E.W.T.	L.W.T	COMP. TYPE	REFRIGERANT CIRCUITS	CAPACITY MODULATION	ELEC.
2	90 tons/175 GPM	13.2	—	52 F	42 F	SCROLL OR SCREW	DUAL	VARIABLE CAPACITY MODULATION OVER ENTIRE OPERATING RANGE	460V/3PH

TITLE: Replace chiller

ATTACHMENTS:

1. MAXIMO Equipment update form
2. Site Map

SCOPE OF WORK: The contractor shall provide all material, labor, equipment, and supervision required to accomplish the following:

General description - The contractor shall replace the McQuay chiller M# AGR095AS27, S# 58K8127301 located at building HP502.

Detailed requirements and specifications - The contractor shall: Remove and dispose of the existing 90 ton chiller and provide and install an air cooled chiller to the following specifications and installation requirements:

Additional Chiller Specifications:

1. Liquid, suction and discharge service valves.
2. Replaceable core filter drier on each refrigeration circuit.
3. Each compressor shall have individual service valves for isolating compressor from the refrigerant circuit.
4. Integral GFCI convenience outlet.
5. Machine controller default language shall be English.
6. Phase monitor to include:
 - a. Phase imbalance
 - b. Over/under voltage
 - c. Phase loss
 - d. Delay on break timer to delay automatic restarts
 - e. Non-critical fault delay
 - f. Programmable auto-manual restart
 - g. Load and line side monitoring
7. Ambient controls for operation down to 35. F.
8. Factory installed Louvered coil guards.
9. Compressor access guard(s).
10. Condenser coil shall be treated with factory/field applied protective coating meeting ASTM B-117 3000 standard. (American Society for Testing and Materials (ASTM) B 117 (neutral salt fog) for 3000 hours).
11. Heat tracer protection for piping and evaporator/chiller barrel freeze protection.
12. Control panel shall have access to micro processor (controller) for viewing or setup, without interrupting machine operation. Hinged control panels are desired.
13. Control power transformer.
14. Single point power connection.
15. Factory start-up w/report. Start up data to be added with permanent marker to inside chiller control panel.
16. First year compressor labor warranty.
17. Five year compressor warranty (parts).
18. Replace unit service electrical safety disconnect switch with blade type, fused, sized to accommodate specifications of new chiller.

Construction Notes

1. Demo and dispose of existing McQuay chiller, S# 58K8127301. The chiller shall become the property of the contractor and disposed of at the contractor's discretion.
2. Provide and install new air cooled chiller to provided specifications. (See chiller spec table above).
3. Chiller shall be mounted on vibration isolators with level adjustment (and leveled).
4. Welding is not permitted on chillers. Water connections shall be by grooved fitting or flange. Provide "Y" type strainer on chill water inlet. Mesh size for strainer shall be determined by manufacturer. Generally, plate and frame, 40 mesh unless otherwise specified.
5. Re-insulate supply and return chilled water piping from isolation valves to chiller connections.

2. polyisocyanurate or cellular glass equivalent insulation w/metal jacket on all exposed piping.
6. Mechanical flow switch (paddle type) in chilled water discharge (outlet) water line shall be in series with safeties/controls whether onboard, electronic factory installed flow switch is provided or not. Flow switch shall be rain tight /vapor proof and shall be set for minimum chill water flow. Existing flow switch may be re-used.
7. If building automation controls are in place on demo'd chiller, they shall be re-installed on the new chiller and made operable.
8. Provide 1/4" P/T ports on supply and return water pipe lines.
9. Provide analog temperature and pressure gauges on supply and return chilled water lines.

GENERAL REQUIREMENTS:

SUBMITTALS:

PRIOR TO PROJECT AWARD:

1. Provide manufacturer specifications for proposed chiller with quote.
2. Provide material lead time with bid proposal.

BEFORE FINAL INSPECTION:

3. Provide installation, start up and maintenance manuals for new equipment.
4. Complete and submit a MAXIMO Equipment up-date form for each piece of newly installed equipment.
5. Provide Factory start-up report.

SPECIAL SCHEDULING AND ACCESS: Chiller to be replaced is functioning at 50% and shall not be taken off line until all equipment and material is onsite and in hand. Downtime must be kept to an absolute minimum due to the critical use of the chiller plant in providing chilled water to three habitated barracks during the cooling season.

SPECIAL CONDITIONS: None Identified

HAZARDOUS MATERIALS: None Identified

ENVIRONMENTAL:

1. All EPA regulations concerning ozone depleting refrigerants shall be followed in the performance of this contract.

BLDG # HP502	SHEET 2 OF 2
DMG SCOTT WILLIAMS	CONTRACT# N40085-10B-0486
USMC CAMP LEJEUNE	PROJECT# 10M095CN
TITLE: REPLACE CHILLER	M-1